Office of State Health Planning.

The Determination of Need Program in Massachusetts

Health in Massachusetts

- **Costs**
- **Quality**
- **Accessibility**

DoN Program

Impact

INTRODUCTION

CHARTS 1 & 2

The purpose of this presentation is to enhance your understanding of one of the Commonwealth's most important health programs - Determination of Need. Conceived by the legislature in response to public outcry against rising health expenditures, "DoN" is now recognized to have health impacts far broader than the issue of costs. It is a key element in the overall strategy of the legislature to provide the citizens of the Commonwealth with a fair, effective and efficient health care system.

Determination of Need introduces rational planning into the realm of health delivery. Although hospitals and other health providers have been producing "plans" for years, these plans have not adequately addressed community and regional needs. Provider plans have typically been institution-oriented, and the interests of a particular institution may or may not correspond to those of the community or region. Determination of Need is an effective mechanism for balancing individual versus collective welfare.

The resources necessary to provide good care to all the people of the Commonwealth are present and available. To become optimally productive, they must be coordinated by a strategy which examines needs, defines capabilities, and sets priorities in a rational way. Determination of Need is a vital cog in the operation of this health strategy in Massachusetts.

Since its inception in June of 1972, the Determination of Need program has made impressive contributions to health care in Massachusetts. It has prevented over $2.5 billion of unnecessary spending on health services. It has stimulated spending on needed health services. It has given consumers a role in the health planning process, and introduced public accountability into the allocation of our precious health resources. Finally, it has improved the quality of care by reducing inappropriate utilization and encouraging the use of the best facilities

whenever complicated treatments are necessary.

The Determination of Need Program was established by the Legislature to ensure that adequate health care services are made available to all citizens of the Commonwealth at the lowest reasonable cost. This mandate includes a broad range of health concerns. The most important of these are quality of care, accessibility of services, public accountability, resource allocation, and cost containment. These variables are interdependent, and no DoN program action ever affects one without influencing the others. Hence, DoN decisions are designed to create the best balance possible among the various health goals.

CHART 3

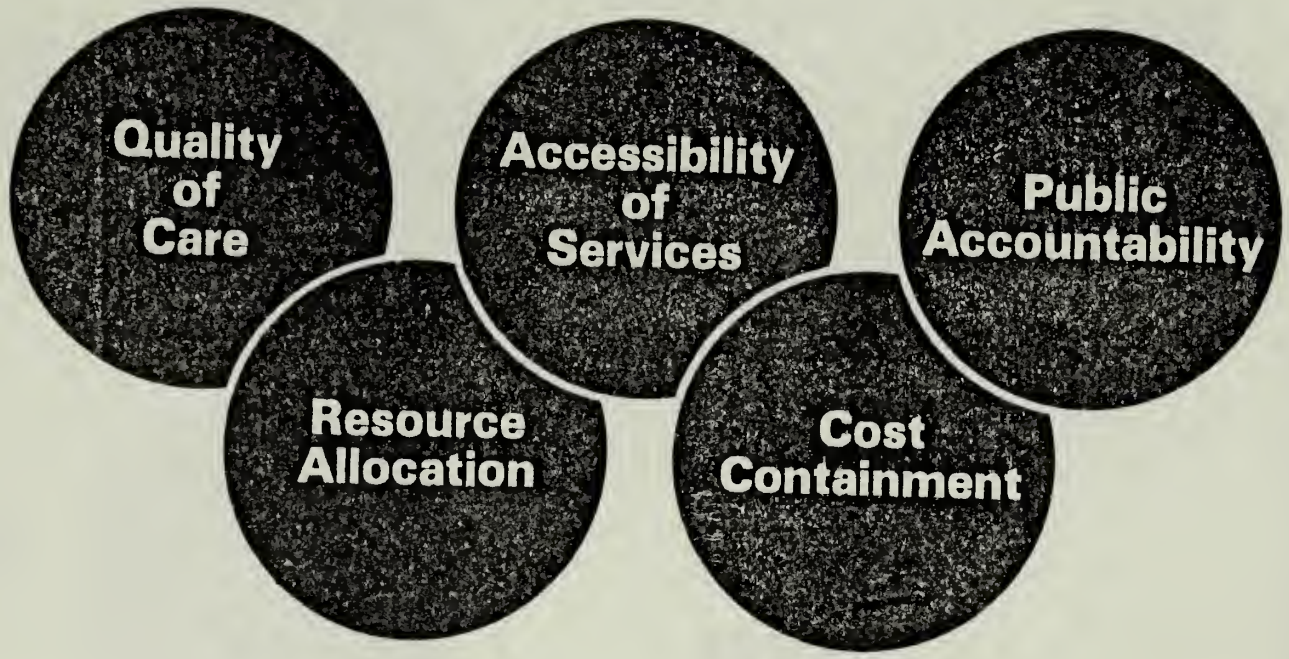
Cost Increases and Cost Containment

Because the price of medical care greatly affects the amount of it that can be delivered, increasing attention is being focused on the issue of health costs. The DoN program in Massachusetts was enacted during a period of mounting health care costs. In 1950, national health expenditures totalled $12 billion and represented 4.6% of the Gross National Project. By 1976, spending for health care had reached approximately $139 billion and constituted 8.5% of the GNP. This combination of public and private expenditures amounts to an outlay of $642 per person in the United States.

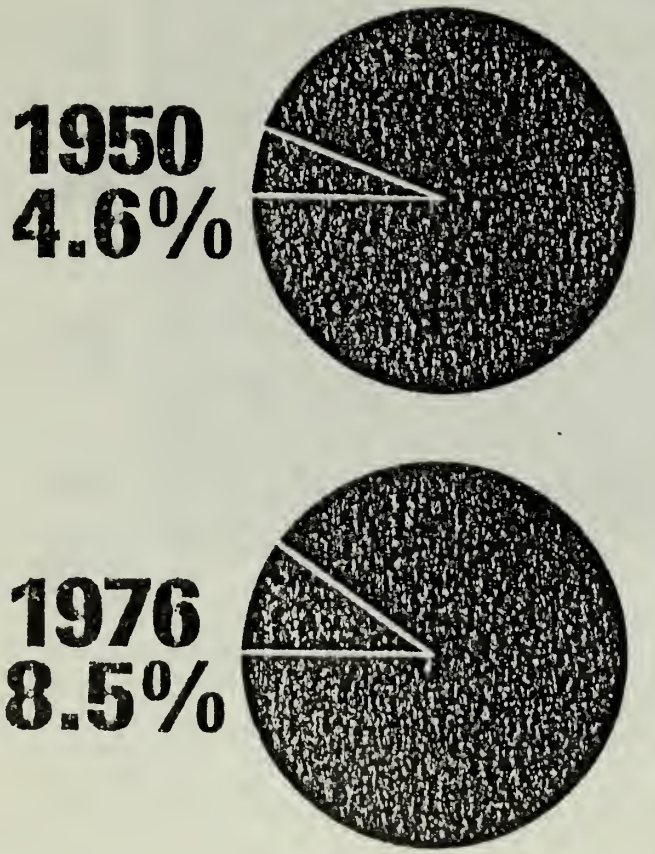
CHARTS 4 & 5

During the period 1965-1975, medical care prices increased at a rate substantially in excess of that registered by the overall Consumer Price Index. Only during the years 1973 and 1974, when the Economic Stabilization Program put a clamp on health costs, did inflation in the health sector lag behind

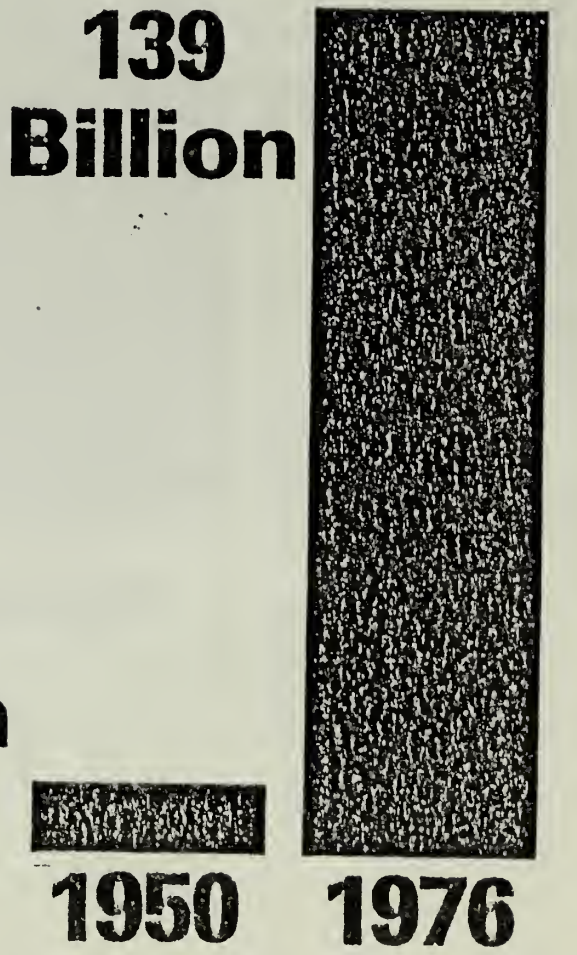
The DoN Focus Is On . . .



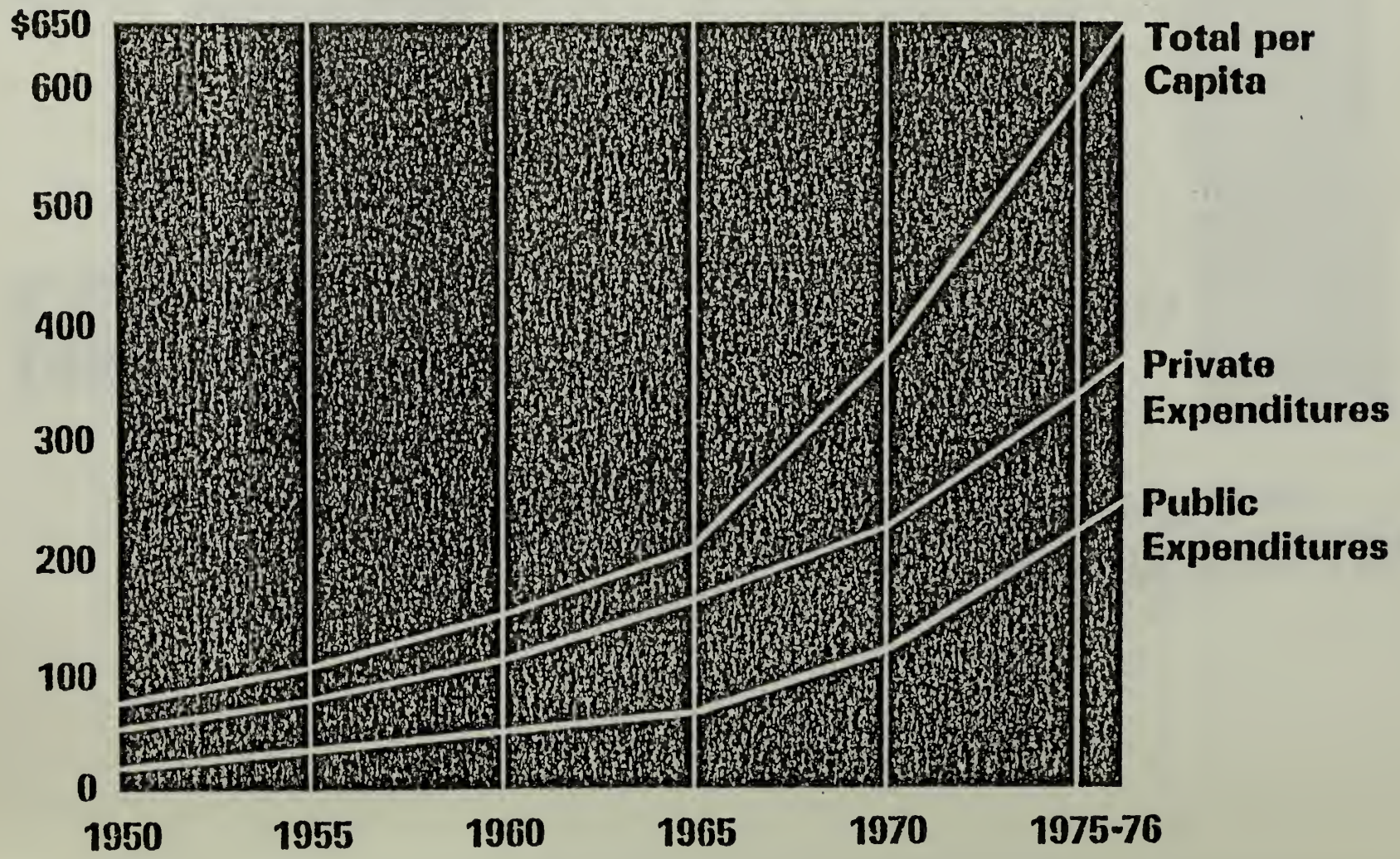
Percent of Gross National Product Devoted to Health Care



Total National Health Expenditures



US—Per Capita Health Expenditures



the general trend of price increases. The end of the Economic Stabilization Program was the signal for an immediate re-acceleration of health care prices, which promptly jumped 12.5% in 1975. This increase included rises of 16.4% in hospital room charges and 12.8% in physicians' fees.

CHART 6

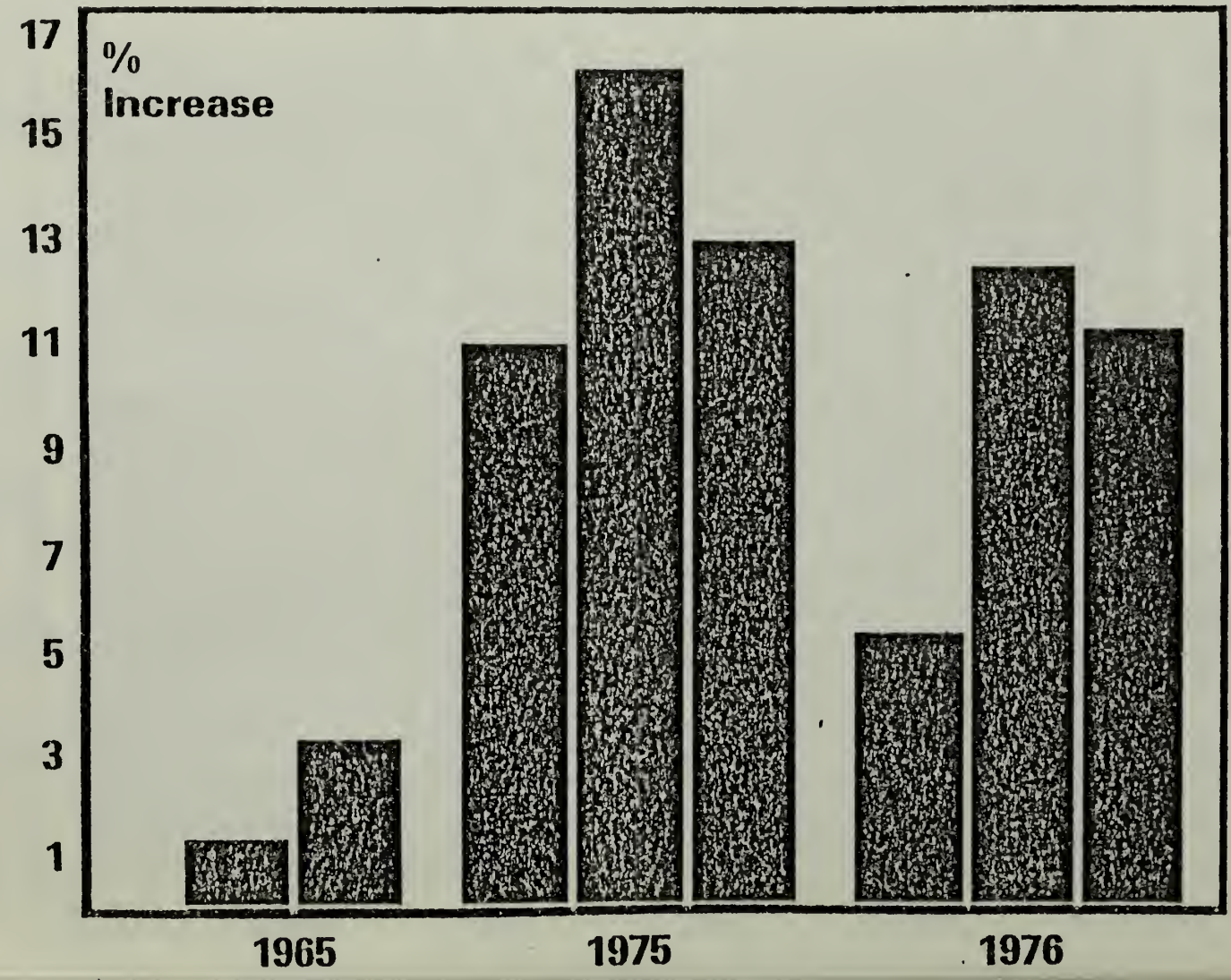
Hospital care continues to be the most important component of health care expenditures. In 1975, Americans spent approximately $46.6 billion, or 30.3% of the total medical bill, on hospital services. The cost of these treatments rose 16.6% between 1974 and 1975. The sharp upward trend in the cost of hospital care is vividly reflected in the prices of some of the most common hospital services. Chart 7 indicates that charges for the treatment of appendicitis, uncomplicated heart attacks and other basic procedures have more than doubled since 1964, even after adjustment for inflation.

CHART 7

The national trend of increases in medical care prices has been paralleled and even exceeded in Massachusetts. Per capita expenditures in Massachusetts were $744, which is 23% higher than the $547 national average. Basic room and board charges in Massachusetts hospitals are now nearly twice what they were seven years ago. Health outlays in Massachusetts represented 6.85% of the Gross State Product in 1969, had risen to an estimated 10.15% in FY 1975, and are estimated to have reached 11% of the Gross State Product in FY 1976. This high cost of health in Massachusetts is clearly reflected in rising health insurance premiums.

CHARTS 8 & 9 & 10

Two of the most important causes of high health costs are excess hospital beds and increased medical technology. Experts estimate that we have 5000 more hospital beds in Massachusetts than are necessary to meet our health needs. These 5000 extra beds are an expensive luxury. Since it costs over $20,000 per year



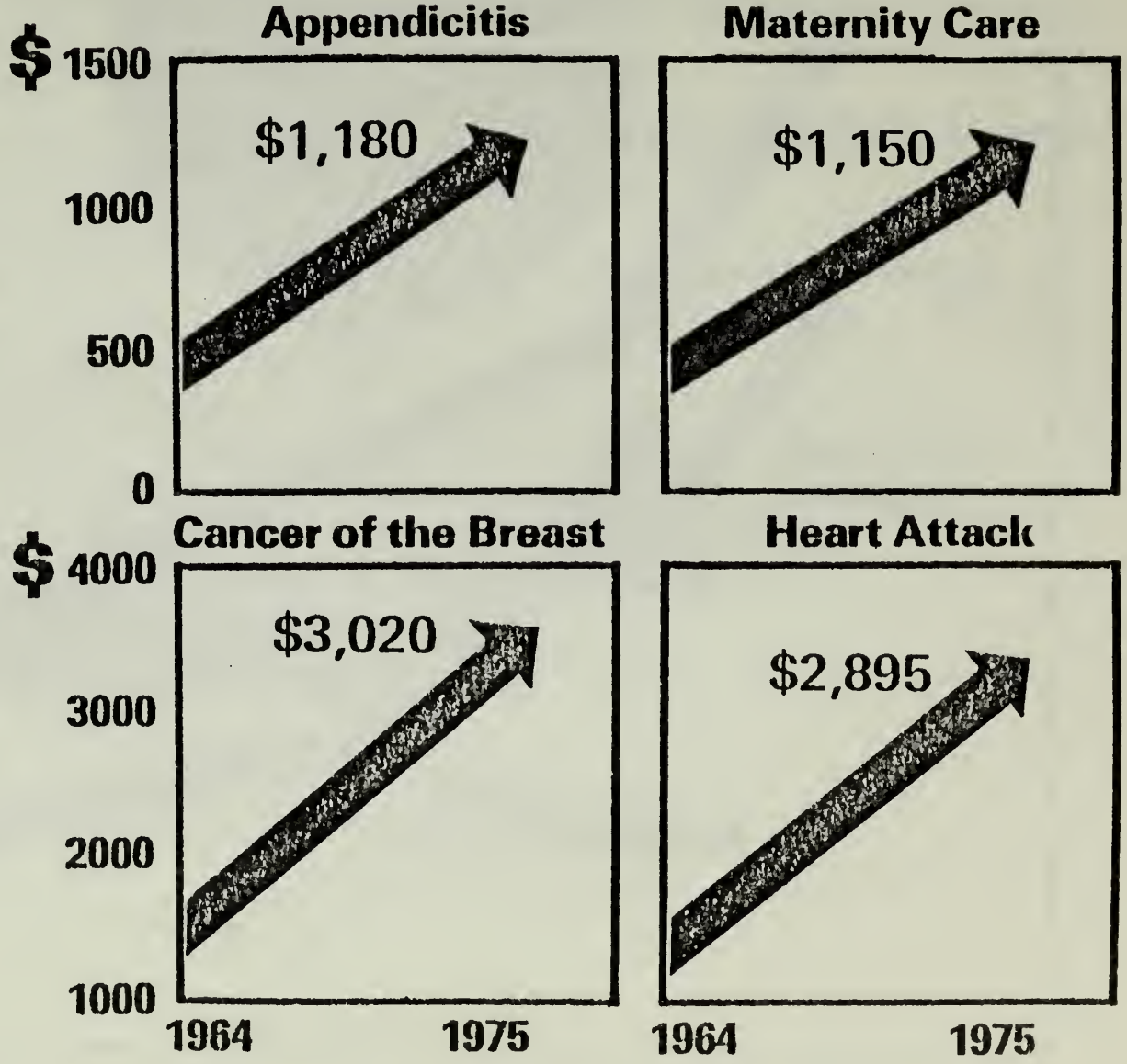
Rate of Medical Care Price Increases vs. Consumer Price Index

CPI
All Items

Hospital Service
Charges

Physicians
Fees

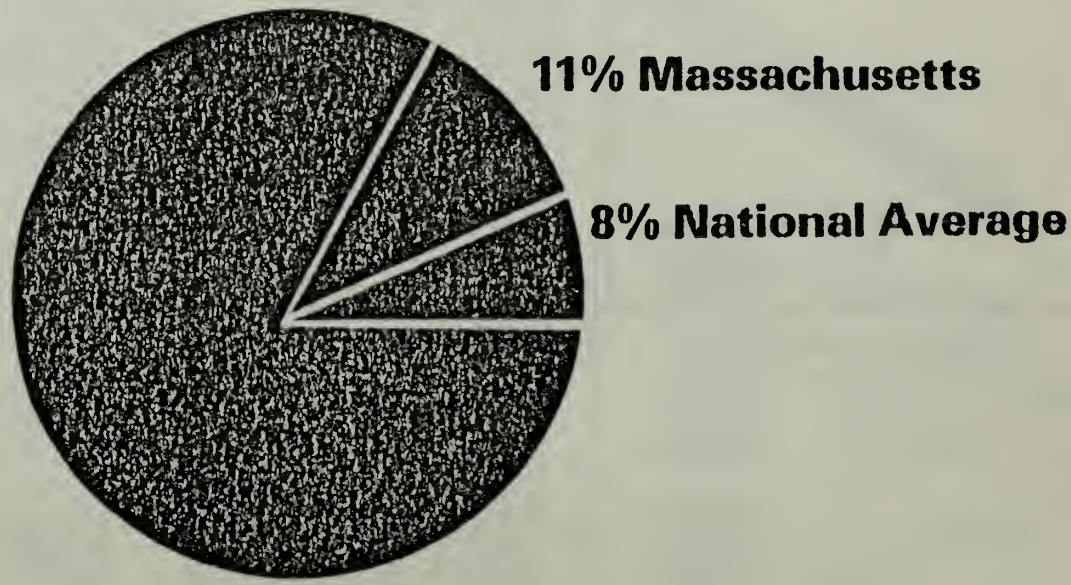
Total Health Expenditures



Health Costs More in Massachusetts

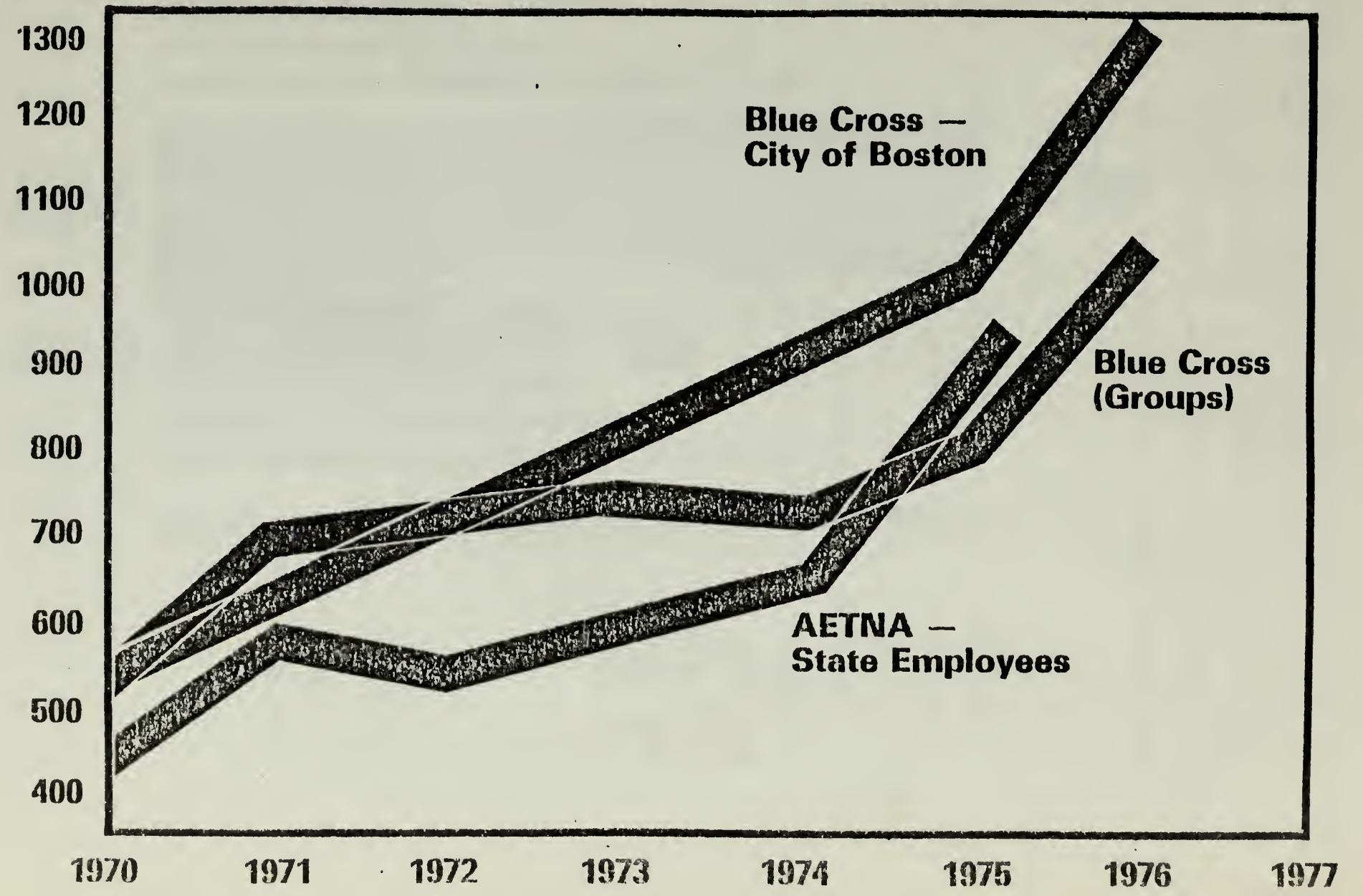
Health Expenses per Person in 1976

Percentage of Total Expenses Devoted to Health in Massachusetts Compared to the Nation



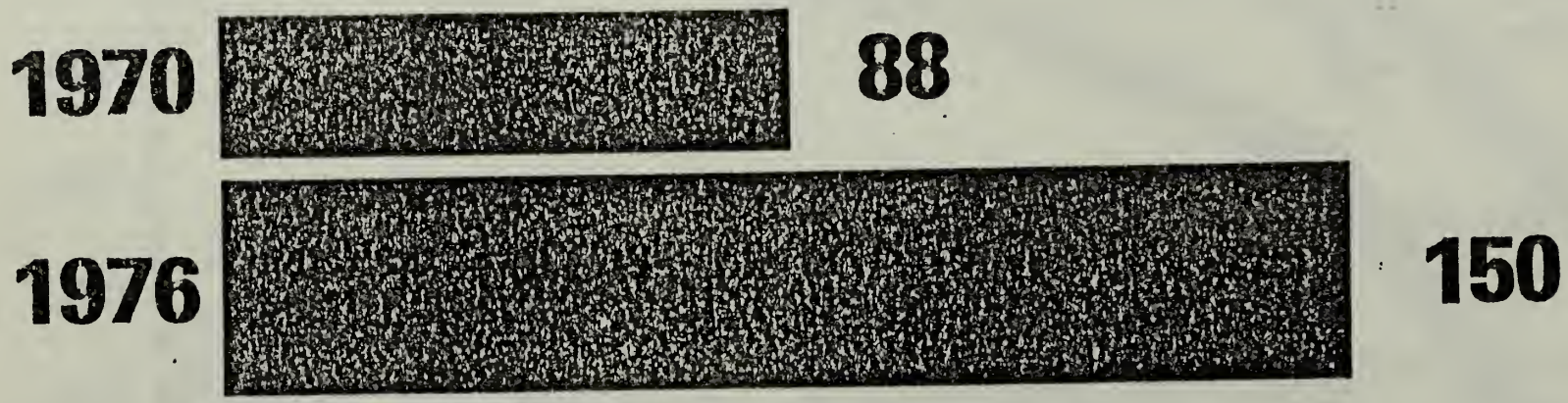
Cost of Insurance Premiums in Massachusetts

1970-76 (Family Policies)

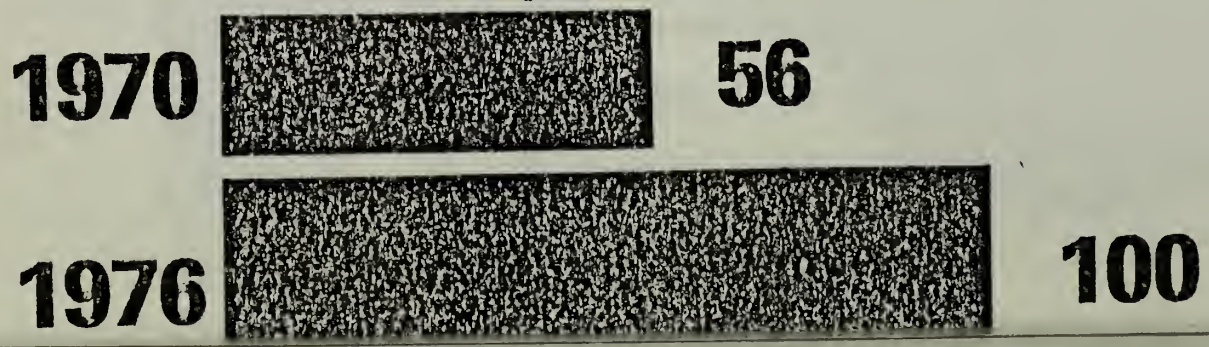


Hospital Charges in Massachusetts

Basic Room and Board Charges Per Day In Boston Teaching Hospitals



Basic Room and Board Charges Per Day in Community Hospitals



to operate even an empty bed, we are spending more than $100,000,000 per year for beds we do not need. If we could eliminate some of these empty beds, we could devote the money now being used for their upkeep to provision of needed services. Thus, the Determination of Need program has worked to channel development away from beds and toward more ambulatory care facilities, alcohol treatment programs, and primary care clinics.

CHART 11

The second important cause of rising health costs is the tremendous increase in the use of highly specialized medical technology. Such innovations as specialized coronary care units, extensive laboratory tests, and computerized x-ray techniques illustrate the trend toward more elaborate, and vastly more expensive, medical technologies. In contrast to technological advances in industry, such advances in the health field have tended to increase rather than reduce costs. And these innovations do not necessarily improve the quality of care that is delivered. The introduction of sophisticated coronary care units has more than doubled the cost of treating a heart attack, but serious doubts remain about whether the units are an improvement over less expensive care. Cure rates for most cancers have not significantly improved over the last 25 years despite development of costly new treatment procedures.

Determination of Need seeks to control the undisciplined proliferation of medical technology. Procedures must be demonstrated to be medically valuable and cost-effective before DoN will approve their use. In this way, consumers are protected from major expenditures which may not be advantageous to their health.

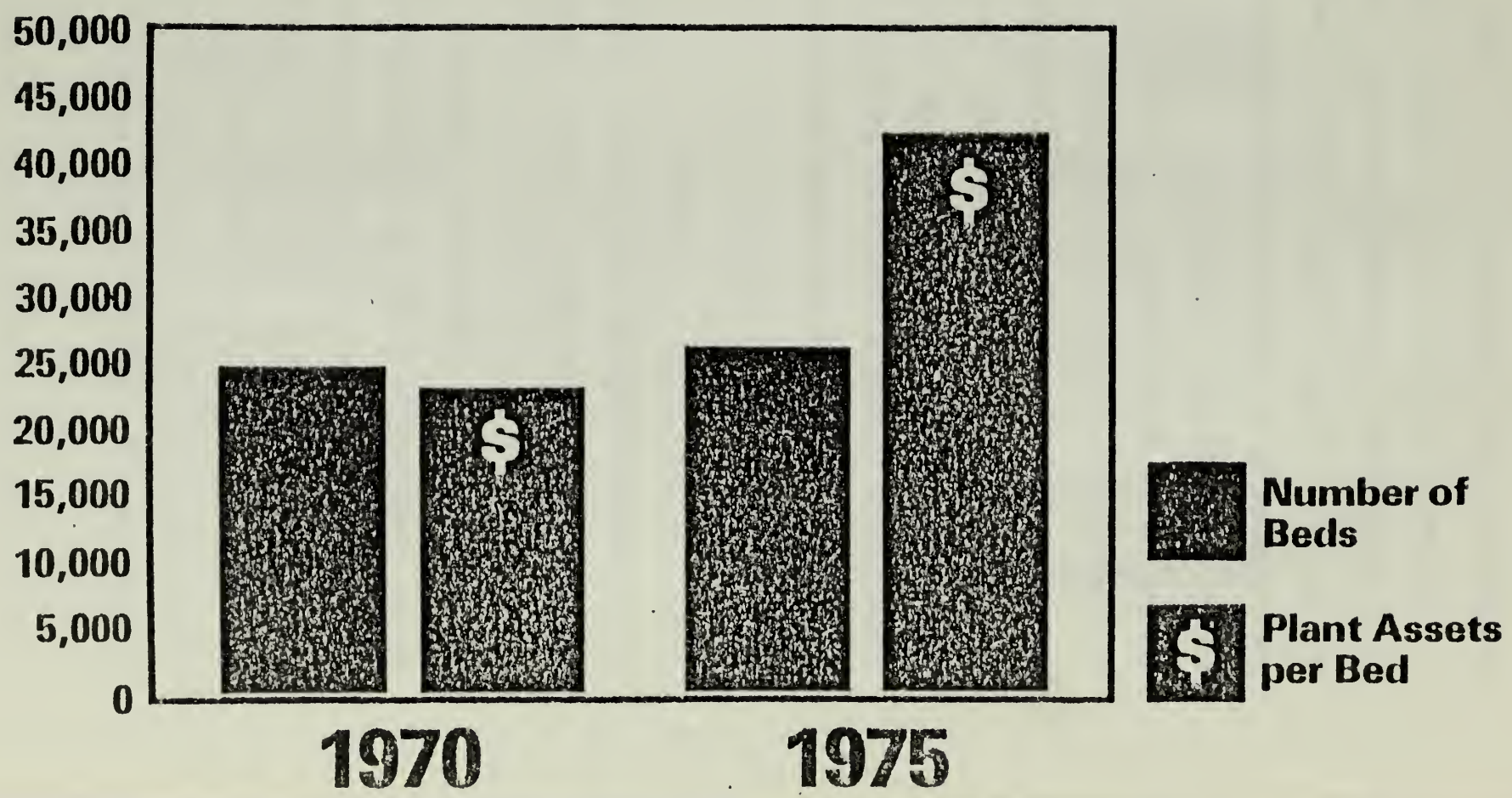
CHART 12

The object of Determination of Need is not to prevent spending on health care. The real purpose is to ensure that health spending is directed toward providing needed care. DoN seeks to stop investment in projects which do not

The Cost of Excess Beds in Massachusetts

Beds in Massachusetts	$	27,000
Excess Beds in Massachusetts		5,000
Cost Per Empty Bed		20,000
Approximate Annual Cost of Excess Beds		$100,000,000

Increased Medical Technology Increases Costs Without Guaranteeing Better Quality of Care



serve the health needs of the Commonwealth. Since our resources are limited, it is important to use them in the most effective ways. DoN encourages spending on health care which people need and do not have.

Determination of Need is not an isolated attempt to control the rise of health expenditures. Governments have begun to develop a variety of mechanisms for monitoring the appropriateness of health spending. Capital expenditure review programs are in place in 49 states and many of these are now developing rate review programs. Massachusetts is a leader in dealing with the financial problems of the health industry. In our state, the Rate Setting Commission is responsible for the review of operating costs. These are the costs which are incurred by health providers in the daily operation of facilities and delivery of services. Examples include wages, heat, power, and supplies. The Determination of Need program is the mechanism that has been selected by the Commonwealth to review capital expenditures by health facilities. Capital expenditures are costs which are associated with the construction of buildings and the acquisition of land and major pieces of equipment.

CHART 13

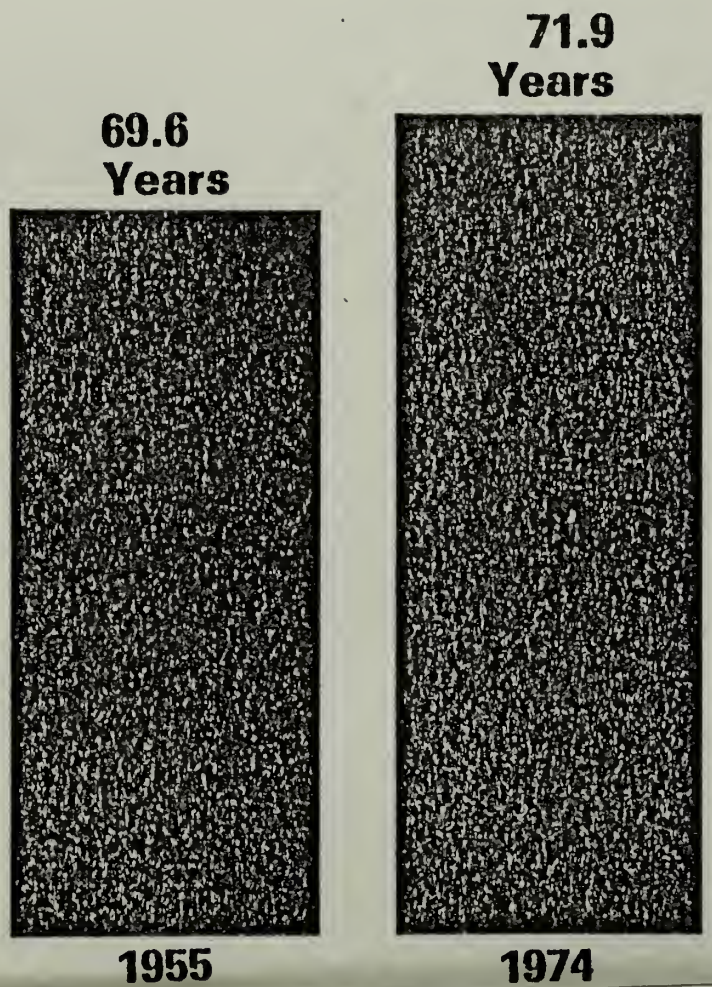
An important question in the light of statistics which show sophisticated technologies and higher costs is: How has the consumer benefitted? The answer is not clear. To be sure, procedures are possible now that were not performed a decade ago and our diagnostic and therapeutic capabilities have been enhanced. But there is no hard evidence to indicate that the general quality of national health has improved. Statistics such as morbidity and mortality have not changed substantially. The average life expectancy has not increased significantly since 1955. The consumer, therefore, has the right to understand how his health care dollar is being spent and whether or not the expenditures are the result of a rational planning process.

CHARTS 14, 15

The Determination of Need program developed as a response to the need for

What are the two main categories of health costs and who regulates them?

DoN	Rate Setting Commission
Capital Cost	Operating Costs
Buildings	Wages
Land	Light
Equipment	Heat
Debt Service	Power
Etc.	Supplies, Etc.



Increased Health Expenditures Have Not Greatly Affected Life Span

Source: U. S. National Center for Health Statistics

The Ten Leading Causes of Death in 1976

Heart Diseases
Cancer
Cerebrovascular Diseases
Accidents
Influenza and Pneumonia
Diseases of Early Infancy
Diabetes Mellitus
Arteriosclerosis
Bronchitis, Emphysema and Asthma
Cirrhosis of the Liver

a better method of establishing health priorities. DoN examines community and regional needs and helps to direct health resources into those programs which can do the most good. The components and process of the DoN program are designed to gather the relevant information and to give consumers, providers, and planners the opportunity to participate in setting health goals.

A "Determination of Need" is written evidence issued by the Public Health Council - an independent body of nine members including the Commissioner of Public Health - that a proposed health project serves public needs. The DoN program has the responsibility to review any project which a health facility undertakes which involves a capital expenditure of more than $100,000 or a substantial change in services.

CHARTS 16 & 17 & 18

The Public Health Council is the decision-making body for Determination of Need. The PHC relies heavily on analyses of projects provided to it by the staff of the Determination of Need program. However, the process is open and includes Health Systems Agencies, government agencies, and individual consumers. All interested parties are encouraged to participate in parallel reviews of applications, with the staff of the DoN program taking responsibility for coordination of the review processes. This opportunity for diverse input increases the likelihood that local and regional needs will be balanced in a reasonable way.

CHART 19

An application for a determination of need is required to include a general description of the proposed project. Among the essential items of information are the identity of the applicant; the scope and nature of the project; the estimated range of capital expenditures and the proposed method of financing; the service area and target population; and, in some cases, an assessment of environmental impact. This information is no more extensive

DoN's Goals

Improve quality of health care.

Provide accessibility to all citizens.

Contain runaway health care costs.

Allocate limited resources to where they can do the most good.

Assure that you (the public) help decide where precious resources go.

A DoN is

A formal assessment, in writing, of a health facility or service

Endorsement by the public health council

Evidence that a health facility project is

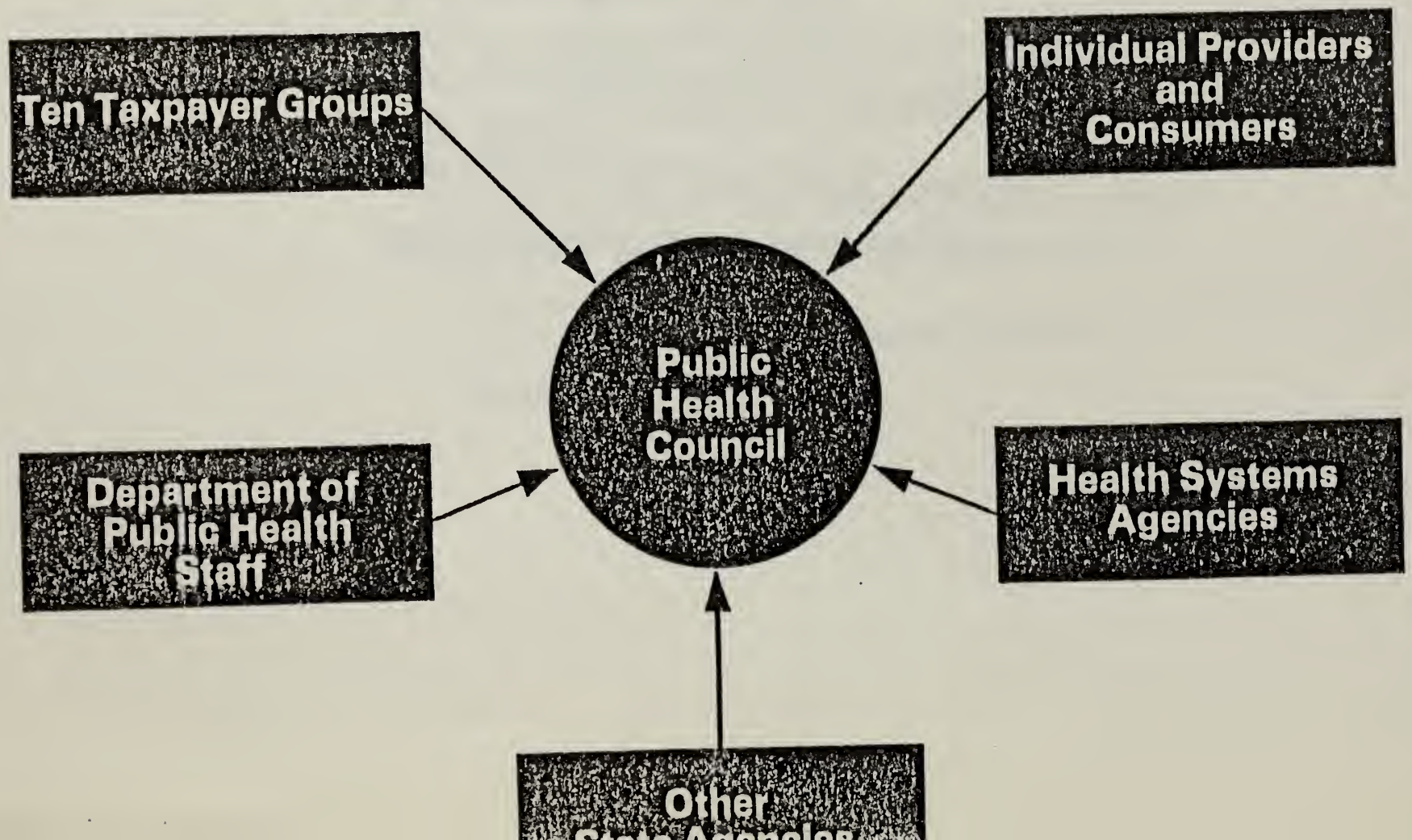
- **Necessary**
- **In accord with local health needs**
- **Financially feasible**

Who Must Obtain a DoN?

Massachusetts health care facilities who wish to

- **Obtain original licensure for hospitals**
- **Make a capital expenditure over $100,000**
- **Add more than four beds**
- **Substantially change services**

DoN Decision-Making Process



than that required by careful hospital trustees when they internally review the appropriateness of a project.

CHART 20

The Determination of Need program seeks to create the optimal balance of health needs and programs. To do this, it examines community and regional needs and relates these to the goals of particular institutions. The projects planned by health facilities should have goals which are consistent with the health needs of the people in their area. DoN seeks to balance these individual and collective needs in a way which has the best effects on quality of care, allocation and accessibility of resources and public accountability.

CHART 21

Costs are not the only reason for reducing the supply of excess beds and limiting the spread of medical technology. Quality of care is a vital concern in these efforts. An excess of empty beds sometimes generates pressures to admit patients who could be treated without hospitalization. This practice can pose serious risks to patients, such as exposure to infection. In addition, some patients are kept in the hospital beyond the time when they could safely go home.

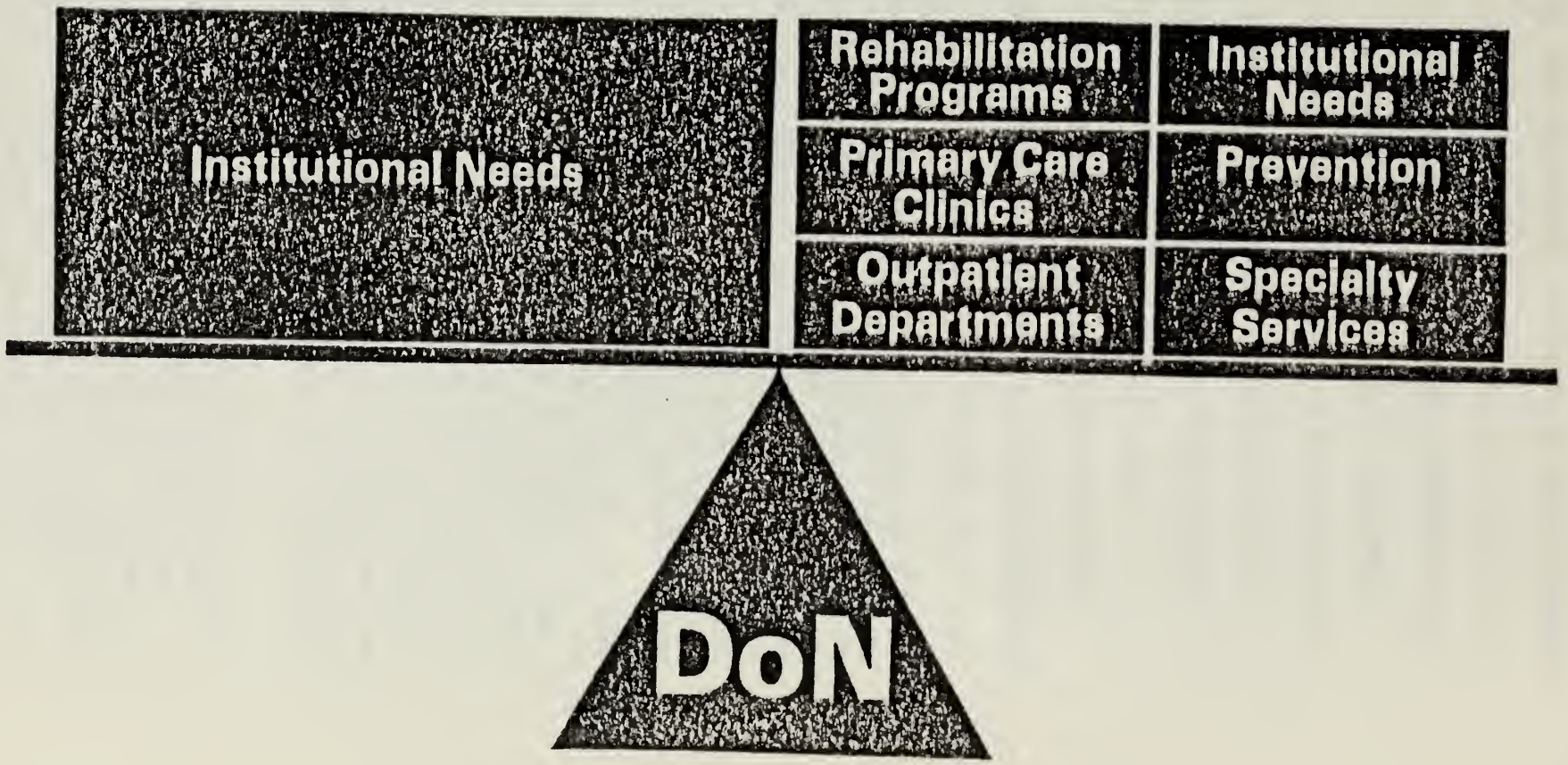
The proliferation of highly specialized medical equipment and facilities also has quality implications. For example, a recent HEW report estimated that of nearly 800 hospitals which were equipped and staffed to perform open heart surgery in 1972, one-third had not performed a single operation. An additional third performed fewer than 12 operations per year, despite considerable evidence that the quality of care deteriorates markedly at such low levels of activity.

Determination of Need works to remove such harmful influences on the quality of care. By preventing the construction of unnecessary beds and the unnecessary

DoN Applications Must Describe

- Nature and Scope
- Range of Capital Expenditures
- Financing Methods
- Service Area Characteristics
- Environmental Impacts

The Delicate Balance Between Institutional and Community Needs



duplication of medical technologies, it removes much of the stimulus for inappropriate utilization. Fewer patients are hospitalized who do not need to be and those who are put in the hospital are not kept longer than necessary. Also, less duplication of sophisticated facilities means we can concentrate our resources on those facilities which are necessary. Thus, when a patient needs to receive a complicated treatment such as a heart operation, he receives it at a facility which does the procedure often enough to provide the maximal quality of care.

Health status is most affected by lifestyle, nutrition, housing, and simple procedures such as pasteurization, immunizations, and treatment of fractures. The cost of these services is low, but the return in improved quality of life is great. The return on our investment in hospital beds and high technology in health care is not nearly so good. Unfortunately, we have tended to overemphasize complicated treatment at the expense of basic health care. Thus, we have more open heart surgery units than we need, but not enough prevention and primary care services. Determination of Need is working to correct this imbalance. Within the past year, it has approved the construction of a major outpatient department and the establishment of several primary care clinics, ambulatory care satellites, and alcohol treatment facilities. These programs reflect the most important health care needs of their communities, and are examples of the DoN effort to make health resources more available and accessible to the people of the Commonwealth.

No program can serve the public need unless it provides for public participation. The Determination of Need program is designed to elicit maximum participation by all groups. The structure of DoN and its processes facilitate a full and open consideration of health issues. The exchange of ideas which is encouraged by DoN increases the opportunity for all groups to express their

opinions and increases the likelihood that interests will be balanced in the optimal way. An examination of the operations and functions of DoN illustrates the manner in which it responds to public concerns.

In order to ensure that quality of care, allocation and accessibility of care, public accountability, cost containment and other important concerns receive adequate consideration, the DoN program has developed a series of decision factors or "standards and criteria." These are developed by Task Forces which include representatives from the Department of Public Health, the Health Systems Agencies, and various consumer and provider groups. The standards serve as decision-making tools which provide basic principles and benchmarks to guide the Public Health Council in its evaluation of applications.

CHART 22

The standards and criteria focus on four major areas of concerns. First, has the applicant's planning process been adequate - that is, has the applicant fully identified the problem and considered all rational alternatives? In addition, has the applicant's planning process included local planning agencies and consumers and does the proposed project address their concerns?

Second, is there sufficient documentation to indicate that the project addresses identified clinical needs? Is there a need for the new construction because of inadequacies in the existing physical plant? Is there a need for special services in the area? The determination of need staff uses the standards and criteria that have been developed by the Task Forces to objectively determine need.

The third area of review is financial feasibility and economic efficiency. Is the facility able to incur additional debt? Is it likely that the costs associated with the project will be fully reimbursed by the major third parties? A negative finding with regard to financial feasibility may cause a denial of the project, regardless of the demonstrated need for the project. If the project is deemed financially feasible, it may still be so inefficient

DoN Decision Factors — Did the Applicant

Consult with	consumers, providers, planning agencies
Ascertain	the project's service to local and regional health needs
Prove	financial feasibility (analysis of balance sheets, income statements, and cash flow projections)
Show	economic efficiency (analysis of hospital size, service area, geographic isolation, occupancy rate)
Evaluate	environmental impact

as to cause an unreasonable increase in operating expenses and costs to consumers.

The final area of review process is an assessment of environmental impact. All applicants must submit evidence that their projects will not have an adverse environmental effect.

These standards and criteria are guidelines, not hard-and-fast rules, for DoN decisions. They have been designed to be flexible enough to allow for special area needs and circumstances. They are being integrated into the Health Systems Plans of the Health Systems Agencies, and will eventually be incorporated into the State Health Plan.

CASE STUDIES - HOSPITAL X

Hospital X, a 79 bed chronic disease/rehabilitation hospital, applied for a determination of need to replace its current facility with construction of a 104 bed facility. The Public Health Council voted to deny the application on the following grounds:

CHARTS 23 & 24

(1) Health Planning Process

Although seven other chronic disease hospitals and seven acute hospitals providing some long-term care existed in the applicant's area, the applicant could show no evidence that they had consulted these institutions or worked with the local HSA. The applicant had planned from the institutional perspectives rather than from the community perspective.

(2) Health Care Requirements

The PHC applied the widely accepted national average of 1.0-1.5 chronic/rehab beds per 1000 elderly. The applicant's region had an elderly population of 105,385, which translated into a need of 105 to 158 CDRH beds. There were currently 1976 CDRH beds in the region, and many of the CDRH facilities were already operating at sub-optimal occupancy levels.

Case Study: Hospital X

Facts

- Chronic Disease/Rehabilitation Hospital
- Current Facility: 79 Beds
- Planned Facility: 104 Beds
- Application for DoN: Denied

WHY?

DoN Decision Factors

- Environmental impact — NEGATIVE
- Planning — insufficient
- Health care need — unsubstantiated

number of beds available in the region	1,976
number of beds needed in the region	105
oversupply	1,871

- Financially — unfeasible
- Economically — inefficient

increase to Medicaid rate	$ 14.68
Increase to Medicaid costs per year	$937,629.00
increase costs to third party payers and private resources per year	$667,804.00

nursing home care more appropriate than chronic hospital care

(3) Financial Feasibility and Economic Efficiency

Approval of the applicant's proposal would have added $14.68 to the Medicaid rate at the facility, and increased Medicaid costs by $937,629 in the first year of operation. Increased costs to other third party payers and private resources would have been $677,804 per year.

A DPH survey showed only 5 out of 53 patients in the applicant's facility needed CDRH care. Nursing home care was judged medically appropriate and for less costly for these misplaced patients.

(4) Environmental Impact

A DPH assessment concluded that the project would have a limited negative impact on the environment of its area.

CASE STUDIES - HOSPITAL Y

In 1975, Hospital Y filed a determination of need which proposed substantial new construction and renovation of the existing plant. The total capital cost of the project was nearly $17 million. Although the Public Health Council found that portions of the project were justified, the Public Health Council denied the application because the applicant had not considered the alternative of regionalizing certain services and was not effectively using its existing physical plant.

CHART 25

Following the denial, the determination of need staff, HSA, and the applicant joined forces to rework the application. The size of the project was reduced, the number of beds was reduced, and other services were consolidated. The project was eventually approved for $13 million. The immediate capital savings for the citizens of the Commonwealth was $4 million. In addition, through more effective use of the existing plant, and the reduction of beds, an operating cost savings of $509,500 per year was achieved.

CHART 26

DENIED

Case Study: Hospital Y

Facts

- Sought DoN for new construction and renovation of existing plant
- Total capital cost = $17 million
- Application for DoN:

WHY?

DoN Decision Factors

- Some portions justified

BUT . . .

- Didn't consider regionalizing services
- Didn't consider more efficient use of existing plant

BUT . . .

PROJECT: APPROVED

Application Revised

- **Size of project adjusted to needs**
- **Number of beds adjusted to needs**
- **Services consolidated**
- **Total project cost—reduced from $17 million to $13 million**

- **Operating costs savings: $509,500 per year**
- **Capital savings to Massachusetts citizens: $4,000,000**

Cost Impacts of Determination of Need

Hospitals X and Y illustrated the important role which DoN plays in the allocation of health resources. DoN helps to prevent unnecessary and duplicative health spending, and encourages spending on projects which are needed, efficient and of high quality. The accompanying cost charts portray the overall, system-wide impact of DoN decisions on the allocation of health resources in Massachusetts.

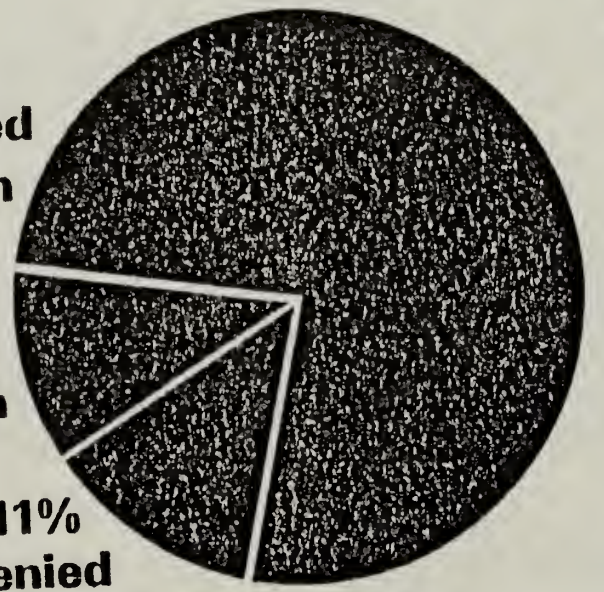
The Determination of Need program has thus far approved 76% of all projects reviewed. These approvals have had an estimated capital and operating cost impact of over $9 billion. This represents the total dollars which will be spent on these approved services over the total projected lives of the projects. This allocation reflects the strong DoN commitment to spending on needed health projects and services.

CHARTS 27 & 28 & 29

Also shown on Chart 29 is $2.8 billion of capital and operating cost savings derived from denials by the Public Health Council. These savings consist of dollars which would have been spent on unnecessary or inefficient health care projects if the projects had not been denied by the Public Health Council. The money saved by denial of these projects is available for spending on more desirable health services and other needs.

The withdrawals item on Chart 29 is an estimate of the savings derived from DoN discouragement of unnecessary projects. Before May of 1975, a high percentage of those applications which were withdrawn were withdrawn because a denial was anticipated. The estimated capital and operating cost savings associated with these withdrawals is over $1 billion.

Cost Charts 30-35 further detail the cost impacts of Determination of Need. Of special interest is Chart 30, which shows that over $300 million of unnecessary spending was averted by Public Health Council denials rendered from



Review of Applications

(Percent of Total Since Program Was Initiated)

Total Number of State Projects Reviewed 803

DoN Approvals Provide $9 Billion for

Summary of DoN Impacts

Approvals	$9,190,082,000
Withdrawals	$1,085,238,000
Denials	
Savings in 1977	$99,373,315
Total Savings	$2,883,505,054

1972-1976. The 1977 impact of these denials is shown in Chart 31 as approximately $100,000,000. Savings to the Medicaid budget amount to over $55 million of the 1977 savings.

CHARTS 30-36

Total Savings Derived From PHC Denials of Hospital and Nursing Home Projects Over The 1973-1977 Operating Period*

Hospitals

Payment Source	Savings
Blue Cross	$ 38,529,837
Medicare	32,509,549
Commercial	19,264,918
Private	12,040,574
Medicaid	11,741,414
	$114,086,292

Nursing Homes

Payment Source	Savings
Medicaid	$162,710,990
Medicare, Commercial Insurors and Private Pay	67,106,788
	$229,817,778

Total Savings $114,086,292 + $229,817,778 = $343,904,070

*These savings were derived from PHC denials from 1972-1976 and have been adjusted for inflation.

Savings to be Derived in 1977 From PHC Denials of Nursing Home and Hospital Projects (1972-1976)

Hospitals

Payment Source	Savings in 1977
Blue Cross	$14,047,035
Medicare	11,852,186
Commercial Insurors	9,218,366
Medicaid	4,372,503
Private Pay	4,389,695
	$43,896,985

Nursing Homes

Payment Source	Savings in 1977
Medicaid	$51,103,827
Commercial Insurors and Private Pay	4,372,503
	$55,476,330

Total Savings $43,896,985 + $55,476,330 = $99,373,315

Savings From PHC Denials of Nursing Home and Hospital Projects Over Life of Project*

Hospital Projects

Payment Source	Net Present Value of Savings
Blue Cross	$ 350,927,260
Medicare	323,465,330
Commercial Insurors	239,810,510
Medicaid	95,252,577
Private Pay	100,385,790
	$1,115,397,767

Nursing Home Projects

Payment Source	Net Present Value of Savings
Medicaid	1,251,819,900
Commercial Insurors and Private Pay	516,287,387
	$1,768,107,287

Total Savings $1,115,397,767 + $1,768,107,287 = $2,883,505,054

*Calculations based on standard 40-year project life

Impact of PHC Approvals of Hospital and Nursing Home Projects Over a 40 Year Project Life

Hospitals	$1,755,234,283
Nursing Homes	7,434,848,900
Total Impact of Approvals	$9,190,083,183

Estimated Impact of PHC Approvals of Hospital and Nursing Home Projects Over a 40 Year Project Life

Hospital Projects

Payment Source	Net Present Value of Approvals
Blue Cross	$ 581,674,000
Medicare	509,017,000
Commercial Insurors	377,375,000
Medicaid	149,194,000
Private	157,974,000
	$1,755,234,000

Nursing Home Projects

Payment Source	Net Present Value of Approvals
Medicaid	$5,576,136,000
Medicare, Commercial Insurors and Private Pay	1,858,712,000
	$7,434,848,000

Total Impact of Approvals $9,190,082,000